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ABSTRACT

This master's thesis investigates the effects of exposing children to curriculum materials that show men and women can do the same work. Four classes of second graders served as subjects. All subjects were pretested on an occupational classification measure. Two of the participating classes were randomly selected to receive the experimental curriculum treatment. The experimental materials, consisting of a six-week social studies unit, represented male and female workers performing the same jobs in a Chinese commune. One class received a placebo treatment consisting of materials dealing with the children's own community and representing male and female workers doing different jobs. The fourth class served as a comparison group. Between pretests and posttests the number of jobs which subjects said could be done by both sexes increased significantly for one of the two experimental classes and for the placebo class. Children's responses on a subset of six jobs done by both male and female workers from the occupational classification measure were studied separately. Between the pretests and the posttests the number of subset jobs which subjects said could be done by both sexes increased significantly for both experimental classes and the placebo class. It was concluded that curriculum materials can be used to expand the number of jobs children classify as suitable for both sexes. (Author/RH)

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THE EFFECT ON PRIMARY CHILDREN'S CLASSIFICATION OF OCCUPATIONS BY SEX OF A SOCIAL STUDIES UNIT ON LIFE IN RURAL CHINA

by

VICKI BRIDGE MULLIGAN
B.A., University of Victoria, 1969

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
in the Faculty
of
Education

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ABSTRACT

Supervisor: Dr. Antoinette Oberg

Researchers have reported that children know which occupations men and women presently fill. Furthermore, children's stated career goals are most often occupations in which their own sex is well represented. The results of exposing children to curriculum materials created to demonstrate that men and women are equally able to fill work roles are reported here.

Four intact classes of second graders served as subjects. All subjects were pretested on an occupational classification measure. The instrument used consisted of pictures of occupational settings or of tools used by workers. Following a brief description of each occupation, subjects indicated whether only men, only women, or both men and women could do each job illustrated. The children's responses were compared using sex, socio-economic status, maternal employment status and intellectual maturity as control variables. Statistical analyses yielded no significant differences on any of these variables.

Two of the participating classes were randomly selected to receive the experimental curriculum treatment. This consisted of a six-week Social Studies unit dealing with life on a Chinese commune. The experimental materials represented male and female workers performing the same jobs. One class received a placebo treatment consisting of materials dealing with the children's own community. The placebo materials represented male and female workers in equal numbers but in

different jobs. The fourth class served as a comparison group.

Following the curriculum treatments all subjects were posttested on the occupational classification measure and two weeks later they were post-posttested. Between the pretest and the posttest the number of jobs subjects said could be done by both sexes increased significantly for one of the two experimental classes and for the placebo class. These increases persisted to the post-posttest. No significant changes occurred in the scores of the second experimental class or the comparison class.

Children's responses on a subset of six jobs from the occupational classification measure were studied separately. These six jobs were illustrated in the experimental teaching unit being performed by both male and female workers. Between the pretest and the posttest the number of subset jobs which subjects said could be done by both sexes increased significantly for both experimental classes. The increase persisted to the post-posttest in only one of the classes. Between the pretest and the post-posttest the placebo class increased significantly the number of subset jobs the children said could be done by both sexes.

It was concluded that curriculum materials can be used to expand the number of jobs children classify as suitable for both sexes. Suggestions were offered to curriculum

developers undertaking the revision of teaching materials for the purpose of eliminating sex bias.

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TABLE OF CONTENTS

Chapter		Page
	ABSTRACT.....	ii
	ACKNOWLEDGMENTS.....	ix
	DEDICATION.....	x
I	STATEMENT OF PROBLEM.....	1
II	REVIEW OF THE LITERATURE.....	5
	Children's Perceptions of Jobs.....	5
	Curricular Influences on Attitudes Towards Jobs.....	7
	Maternal Employment and Children's Attitudes Towards Jobs.....	22
	Social Class and Attitudes Towards Jobs.....	26
III	METHOD.....	27
	Sample.....	27
	Instrument.....	27
	Research Design.....	28
	Materials.....	30
	Limitations.....	32
	Assumptions.....	33
	Hypotheses.....	34
IV	RESULTS AND CONCLUSIONS.....	35
	Pretest Data.....	35

Chapter		Page
	Changes in Occupational Classification Scores	39
	Summary of Results	53
V	SUMMARY AND IMPLICATIONS	55
	Implications for Further Research	57
	REFERENCES	61
	APPENDIX A	67
	APPENDIX B	70
	APPENDIX C	75
	APPENDIX D	97

LIST OF TABLES

Table		Page
1	Comparison of Female Representation in Selected Occupational Categories With Children's Responses that the Job Can be Done by Both Sexes.....	36
2	Comparison of the Pretest Scores of Subjects Grouped by Sex, Socio-economic Status, Maternal Employment Status and Intellectual Maturity.....	38
3	Changes in Occupational Classification Scores.....	40
4	Changes in Classification of the Six Occupations Portrayed in the Experimental Materials.....	51

LIST OF FIGURES

Figure		Page
1	Changes in Occupational Classification Scores	41
2	Changes in Responses to the Construction Worker Item	44
3	Changes in Responses to the Child Care Item	45
4	Changes in Responses to the Doctor Item	46
5	Changes in Responses to the Soldier Item	47
6	Changes in Responses to the Teacher Item	48
7	Changes in Responses to the Tractor Item	49
8	Changes in Placebo Group Responses to the Subset Items	52

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To my mother, Maureen Bridge,

with love.

CHAPTER I

Statement of Problem

In Canada, the proportion of one sex in most occupational categories exceeds its representation in the labour force as a whole. For example, in 1971, when men formed 65% of the labour force, over 98% of the carpenters, truck drivers, and police officers were male. In the same year, over 96% of the babysitters and over 82% of the elementary and kindergarten teachers were female. The segregation of male and female workers is not in itself a cause for serious concern. Rather, it is the difference between the salaries paid in the male dominated jobs and those paid in the female dominated jobs which has evoked criticism of the existing situation. The 1971 census revealed the average income of employed Canadian women to be less than half that of men. More recent statistics indicate that this gap is widening (McDonald, 1977).

Several explanations and justifications for our segregated work force have been put forward. The first points to the physical differences between the sexes. Differences in strength and reproductive capacities have been used to define appropriate work for men and women. Technical advances and reliable birth control methods have together nullified this biologically based argument. A second explanation, which is more frequently used, is based on the attitudes about the sex role appropriateness of various occupations. People are taught which jobs are suitable for members of their own sex and they then limit

their aspirations to those jobs. A third explanation of the division of labour is founded on a Marxist analysis of the beneficiaries of the present segregation. Employers who collectively use women as a cheap, flexible labour pool have been pointed to as the force behind the prevailing attitudes towards occupations. This dominant class, through its control of the schools and the media, promotes the attitudes which serve its own purposes.

The present study began as an exploration of the plausibility of changing the existing assignment of jobs. Using the sociological model which states that people learn which jobs are suitable for members of their sex, is it possible to expand the number of jobs people see as suitable for themselves? Can they be taught that jobs are appropriate for anyone? If all of the cues received by an individual supported the idea that all jobs are suitable for both men and women, the answers to these questions would certainly be yes. However, given the facts that the existing division of labour is profitable to some and a convenience to many, the likelihood of quickly changing "all cues" is very remote. Is it possible, on a smaller scale, to counter-act the prevailing messages relating to jobs? The effects of an attempt to teach children that men and women are equally suitable for jobs were considered in the present study.

Significance of the Study

There is empirical evidence to suggest that children as young as kindergarten age are aware of the division of labour between men and women (Bingham, 1975; Scheresky, 1977; Shepard & Hess, 1975; Tibbetts, 1975b). Parental models, children's literature, text books, television shows and commercials, and toys all contribute to this knowledge. Although career decisions are remote for young children, durable attitudes towards jobs are being formed during the early elementary school grades. Any intervention designed to influence attitudes towards occupations may have a greater chance of success among younger children.

Some base-line data on children's perceptions of the suitability of jobs for men and women are reported here. The effects of the child's sex, socio-economic background, intellectual maturity and mother's employment status on these attitudes towards jobs are also reported. Finally, the results of exposing children to curriculum materials created to demonstrate the ability of men and women to do the same kinds of work are described.

The goal of maximizing the number of vocational choices children see open to them is compatible with the goals of schools. The replacement of teaching materials depicting a narrow range of job options for women with materials depicting the equal participation of both sexes in the labour force supports educators' stated goal of helping each child reach his or her full potential. Although

schools have traditionally reflected the prevalent values of the community, in this study the possibility of using the schools to promote social change was explored. If it is possible, by means of curriculum changes, to overcome those influences which tend to restrict people's career aspirations, such changes are certainly justifiable and congruous with the stated goals of education in almost all North American jurisdictions.

CHAPTER II

Review of the Literature

Children's Perceptions of Jobs

Research reports have consistently indicated that elementary school children have a good knowledge of which jobs are done by men and which jobs are done by women. This knowledge is reflected in their responses when asked who can or who should do various jobs. Garrett, Ein and Tremaine (1977) found that first, third and fifth grade children's responses to questions about who can perform forty different jobs closely matched reality as indicated by American Census data. Scheresky (1977) obtained similar results when questioning six, eight and ten year olds as to who could do fifteen different jobs.

The occupational goals stated by young children coincide with their knowledge of the sex-based division of labour, with boys and girls aspiring to occupations in which their own sex forms the majority of workers. Schlossberg and Goodman (1972) found that among their kindergarten and sixth grade subjects 83% of the girls and 97% of the boys chose occupations traditionally held by members of their sex. Among second grade girls the most popular choices are teacher and nurse, selected by over two-thirds of the subjects in studies by Looft (1971) and Siegel (1973). Franken (1977) and Hewitt (1975) found that the variety of occupations selected by boys exceeded the range of choices of girls. The reported narrower range of aspirations among girls is

additional indication of children's knowledge of what exists in society. In 1975, Labour Canada reported that over two-thirds of the female labour force held jobs in one of four categories: clerical, service, medicine and health, and teaching (p.49). At the same time, male workers were employed in a broad range of occupations.

Although children are apparently aware of who usually performs most visible jobs, there are noteworthy differences in the responses of boys and girls. This difference was first reported by Iglitzin (1972) who studied fifth graders' classification of jobs by sex. Boys gave significantly more traditional responses than girls but, unfortunately, she did not report the methods used to analyze the data or the levels of significance of her findings. However, Iglitzin's findings have been supported by later studies. Kesselman (1974) found fifth and sixth grade boys scored significantly higher than their female classmates on a measure of sex-role differentiation. Tibbetts (1975) questioned children in grades one through four regarding who should do thirty different jobs. The children could respond "men", "women" or "both". Although the children's responses indicated their knowledge of the existing division of labour, the boys in Tibbetts' study responded "men" to traditional male occupations such as train engineer and pilot in significantly higher proportions than did the girls. Greater proportions of girls than boys responded that jobs usually held by men should be done by women or by both men and women. Garrett, et al (1977) also found boys to

be significantly more traditional than were girls in their classification of occupations.

On the basis of these studies, it was predicted that the classification of occupations by children in the present study would follow "traditional" patterns of assigning male and female workers to occupations thereby reflecting the existing division of labour in Canada. In addition, it was predicted that the girls more frequently than the boys would respond that jobs could be filled by both men and women.

Curricular Influences on Attitudes Towards Jobs

Content analyses of the curriculum materials being used in many North American school districts have documented that men and women are being portrayed in traditional occupational roles. Those studies relating to primary Social Studies materials are summarized here, but comparable findings exist for all grade levels and for language arts materials as well. Frisof (1969) examined American primary Social Studies textbooks and found men to be shown in over 100 different jobs and women to be shown in fewer than 30 jobs. Similarly, O'Donnell (1973) studied first and second grade Social Studies textbooks used in Washington, D.C. schools and found that 83% of the pictures of occupations showed men and 17% showed women, with traditional occupations such as housewife, nurse, secretary and teacher predominating in the illustrations of female workers. Interestingly, none of the books in O'Donnell's study included pictures of men at home engaged in childcare, dishwashing or cooking. Roberts (1977) found the Year Two

picture sets being used in British Columbia schools to show 43 men working at 30 kinds of jobs and 16 women working at 13 kinds of jobs. These researchers all evaluated these ratios as undesirable and hindering the objective of equalizing the occupational aspirations of girls and boys. Critics of existing materials do not claim the portrayal of workers to be unrealistic, rather they fear the traditional models may have the effect of restricting children's aspirations to similar traditional roles.

Following these descriptive studies, several researchers have assembled teaching materials which they hoped would lead children to an expansion of the number of jobs they see as suitable for themselves. To compensate for the infrequency of portrayal of women workers, some studies have focused on the effects of showing children examples of women in atypical occupations in an effort to offer girls a range of choices comparable with boys'. These curriculum units which have been developed for the purpose of changing children's attitudes towards occupations vary greatly in quality of content, duration, and effectiveness. The reported results range from children becoming significantly more egalitarian (Vincenzi, 1977), to children becoming somewhat more traditional following exposure to the experimental materials (Weeks, Thornburg & Little, 1977).

In a study involving kindergarten children, Barclay (1974) developed a picture test to measure subjects' attitudes regarding who can perform various jobs. The test consisted

of a series of 20 drawings of either places where people work or the tools used by workers. Subjects were read a brief description for each job and were asked to indicate who could do the job by selecting a male or female paper doll or both dolls and placing them on the pictures. The children were divided into three treatment groups and pretested. For 15 minutes a day over 3 days one group read and discussed books dealing with working women while a second group read and discussed a career information pamphlet which made no reference to the sex of the workers. The third group of children served as a control and received no treatment. Following the treatments the subjects were posttested on the same picture test. Children who read and discussed the books dealing with working women chose significantly more female dolls on the posttest than they had chosen on the pretest.

Although Barclay's selection of materials dealing with working women brought about a significant change in the number of jobs subjects said women could hold, the change from viewing jobs as suitable for men only to viewing them as suitable for women only is of questionable merit. There may be a need to assist girls in "catching up" with their male peers in terms of aspirations, but a curriculum designed to demonstrate that jobs can be held by both men and women is the only type which is justifiable in the long term.

Another study involving kindergarten children by Flerx, Fidler & Rogers (1976) raised the question of the durability of changes in attitudes towards sex roles. The measurement

technique used by Flerx et al. included items related to other aspects of sex roles as well as attitudes towards working women. Children could select a male and female pair of dolls or a single male doll or single female doll to indicate to whom statements made by the experimenter were applicable. The statements included references to occupations, nurturant behaviours, play activities, affect-expressiveness and intelligence. Children scored two points for selecting both dolls and one point for selecting one doll.

The treatments employed by Flerx et al. included reading stories selected from bibliographies of books which portray males and females in unusually egalitarian roles; reading books classified by reviewers as particularly traditional; and viewing egalitarian films. The treatment sessions lasted seventeen minutes a day for seven days. On the immediate posttest and on the delayed posttest one week later, the egalitarian book and film treatments produced a significant increase over pretest scores on items relating to work roles. The immediate and delayed posttest scores on the work items of children who heard the egalitarian stories and saw the egalitarian films were significantly higher than the scores of children who heard the traditional stories. Children in the egalitarian books and films treatment groups also made significant gains between the pretest and immediate posttest on items relating to nurturing behaviours and children's play activities. However, the gain persisted over the week following the treatment for the film group only. The scores

of the egalitarian book group on the same items diminished significantly between the immediate and delayed posttest.

In contrast with the small curriculum units studied by Barclay (1974) and Flerx et al. (1976), Greenberg and Peck (1973) created an experimental kindergarten programme which lasted for a whole school year. The stated objective of the programme was to provide children with knowledge of and respect for the professions, crafts and vocations which help satisfy basic human needs. The curriculum was designed to help each child aspire to full future participation in the adult world of work and leisure. While the focus was on Social Studies concepts, activities in other subject areas were planned to complement the central theme. In addition, Greenberg and Peck conducted concurrent bi-monthly meetings with participating teachers for the purpose of sensitizing them to the question of sex role stereotyping. Unfortunately, the measures developed for the assessment component of the study were not described. Greenberg and Peck reported that the combined influences of the experimental curriculum and increased teacher awareness resulted in no change in the children's classification of occupations by sex and a slight insignificant change in their occupational choices.

Guttentag and Bray (1976) designed a large experimental curriculum project to modify the rigidity of children's sex-role stereotypes. Kindergarten, fifth grade and ninth grade students received experimental treatments considered to be appropriate to their grade level over a six week period. The

teaching materials were selected from commercial sources and included pictures, books and records portraying non-traditional adults as well as suggested activities, discussion and research topics. The kindergarten and fifth grade portions of Guttentag and Bray's work are more relevant to the present study and are summarized here.

Most of the measures of children's sex-role concepts developed by Guttentag and Bray were inappropriate for use with kindergarten children. Therefore kindergarten children were asked to name the jobs that women could have and the jobs men could have. On the pretest both boys and girls listed significantly more jobs for men than for women and the number of jobs which appeared in both lists was very low. Following the experimental curriculum treatment there were no significant differences between the average numbers of men's and women's jobs listed by either the boys or the girls. The number of jobs which appeared in both lists also increased significantly.

Thus, Guttentag and Bray's curriculum could be classified as successful in bringing about the desired changes in kindergarten children's attitudes. The lesson outlines, however, raise serious questions concerning the means by which the researchers' goal was achieved. The most obvious problem with the suggested lessons is their total lack of subtlety, to the extent that they convey the spirit of a crusade to stamp out sexism. It is this sense of zeal which raises the suspicion

that the lessons could be conducted in a doctrinaire fashion. Two of the eight lessons state as their goal "To discover children's present sex-role concepts and expand if limited." Yet, the suggested activities do not provide for demonstrations of a wide range of behaviours by men and women. The teacher is directed to "discuss" whether activities could be undertaken by both men and women. Without specific examples, such a "discussion" could easily become a matter of the teacher telling the children that women can do anything men can do. This message, even if delivered with the greatest of teacher conviction, is contrary to what most children see in books, on television and among the adults they know. It can only harm the teacher's credibility. Apart from the inefficiency of the telling approach, it is also unjustifiable for a teacher to try to impose on children his or her prescription for the best of all possible worlds. Certainly the objective of eliminating sex-role stereotyping supports the principle of equality, but to do so in an authoritarian fashion is inconsistent with that principle. The Guttentag and Bray kindergarten lessons appear to be designed to indoctrinate students rather than to educate them.

The Guttentag and Bray kindergarten curriculum can also be challenged on the appropriateness of activities for the children's developmental level. While the problems dealt with are apparent to adults, it is doubtful that kindergarten children can comprehend notions such as sex stereotypes in literature. Counting the numbers of male and female main

characters in story books (p.58) sounds like good counting practice but little else. Similarly, egocentric kindergarten children probably do not appreciate references to the issue of inequality. The goal of one lesson is to create stories so that "children see that...no status inequities arise in cooperation between males and females," (p.56). An understanding of the concept of social status requires children to synthesize their knowledge of power, education and income levels. These are unrealistic expectations for kindergarten children.

The portion of Guttentag and Bray's study dealing with fifth graders yielded quite different results. After receiving the experimental curriculum treatment, the fifth grade girls listed significantly more jobs for women than they had listed in the pretest. However, the boys did not change. Among the girls, the numbers of jobs listed as suitable for both men and women did not change. Unfortunately, the researchers did not report the actual numbers of jobs listed by the subjects in the pretest and the posttest, leaving some unanswered questions concerning their findings. For example, they stated that the pretest showed the fifth graders to be the least dogmatic about sex-roles and that "they seldom discriminated between men and women in societal and occupational roles," (p.281). Perhaps the subjects were so egalitarian to begin with that there was little room for improvement. It may also be that asking children to list jobs men and women can have is a poor way to measure their attitudes towards occupations.

Analysis of the change in the kinds of jobs listed might have been more informative than comparing the numbers of jobs in each list.

A noteworthy description of the subjects prior to receiving the experimental curriculum reads: "The intellectual issue of equality in occupations was easy for fifth graders to accept," (p.281). This suggests that the children were basing their answers on the principle of equality. Again, the omission of detailed findings makes it impossible to judge the bases for the cited claim. If, however, the subjects did indeed accept equality as an intellectual issue, they were a most atypical sample of ten year olds.

The fifth grade curriculum unit is very different in tone from the kindergarten unit. Far from dictating role equality to children, it actually avoids the issue. The assignments stopped at the point of directing children to describe family life and the place of women among various societies. To recommend that teachers deal with the topic of role stereotyping in only a descriptive manner seems inconsistent with the authors' stand. If the aim of the curriculum is to promote change, opportunities must be provided for students to evaluate the roles people play. Finding out what life was or is like in different societies is interesting, but the inclusion of discussions appraising the findings and considering the reasons supporting the evaluations would improve the quality of the teaching unit and increase the likelihood of its achieving its goals. At a more practical level, the

very serious problem of obtaining materials at the children's reading levels is not dealt with adequately. Even in the best of school libraries it would be very difficult to have fifth grade students research topics such as the role of Israeli or Russian women.

Woolever (1976) conducted another large, long-term study of the influence of curriculum materials on children's attitudes towards occupational and social roles. Ninety-one volunteer teachers from kindergarten through sixth grade agreed to use materials and teaching strategies developed by the researchers. Over a five month period the participating teachers could select as many of the experimental lessons as they wished. The materials included non-sexist books, films, pictures, records and occupational simulation packets. In-service training was also provided for the teachers to assist them in recognizing their own biases and in eliminating sexism from their classrooms. Children's attitudes were pretested and posttested by asking them who should perform various jobs or activities: only a man or boy, both men and women, or only a woman or girl. Children received one point for each "both" response and no score for either of the other choices. An additional measure of attitudes towards women was used with the third through sixth grade subjects. The amount of treatment presented was found to be positively correlated with the amount of positive pupil attitude change among the kindergarten through second grade subjects. However, among the third through sixth grade subjects there was no significant cor-

relation between the amount of treatment and the amount of pupil attitude change on either of the measures. Significant differences between boys and girls were also reported, and again the younger children differed from the older children. Among the kindergarten through second graders the boys showed significantly more positive attitude change than the girls, while among the third through sixth graders, the girls showed significantly more positive change.

Aside from the question of whether curriculum materials can make a difference to children's attitudes, the Woolever study raises the problem for curriculum developers of teachers' interest in the matter. Although the teachers volunteered to participate in the study, Woolever found that, on the average, they had made little use of the resources available to them. It may be that the mixture of materials, with no more in common than their classification by the researchers as non-sexist, has little appeal to teachers facing curricular directives and parent pressure to teach skills. Materials relating to a particular theme, designed to complement prescribed courses of study may be more useful to teachers. On the other hand, it may be that regardless of the type of materials provided, teachers do not perceive any need to be concerned with how children classify jobs or activities by sex. There is some evidence to suggest that sex stereotyping is a non-issue among many teachers. Ricks and Pyke (1973), in a survey of sixty Ontario secondary school teachers, found that 57% of their subjects felt it was not a teacher's responsibility to

facilitate sex-role changes. Additional research is needed to clarify the issue and determine the extent to which Ricks and Pyke's findings hold true among elementary teachers.

Parks (1976) studied the effects of a career-orientated curriculum on children's classification of jobs by sex which was measured by asking children which occupations in a list of 16 were for men, for women, or for men and women. An experimental treatment was used for four weeks with third, fourth and fifth grade classes. One class at each grade level received the treatment and one class at each grade level served as a control. The curriculum included existing career education materials supplemented with "questions on the sex-stereotyping of careers" developed by the researcher. Using a posttest-only research design, Parks found significant differences between the responses of the experimental fourth and fifth graders and the controls. There was no difference between the third grade groups. Parks reported that the experimental fourth and fifth grade classes were less sex-stereotyped, yet it is unclear from the description of the study if this meant the experimental subjects responded "both" to more occupations, or if they saw jobs which are most often held by men as women's jobs and vice versa. The importance of the distinction has been discussed in the review of the Barclay study.

The curriculum developed and tested by Parks was intended "to raise pupils' awareness of sex-stereotyping and the restrictions it imposes on freedom of choice," (p.471). This

imposition of the curriculum developer's own evaluation and justification, apart from their intrinsic merits, is unacceptable in a democratically based public education system. To facilitate children's development into reasoning, self-directed adults, they require practice and guidance in deciding the virtues of any given state of affairs. They ought to be encouraged to make and substantiate their own judgements.

The conclusions reached by Parks also invite comment. Since there was no difference in the responses of the experimental and control classes of third graders, the title question "Career Development - How Early?" was answered by recommending that career studies be postponed until the fourth grade. The study does not support this conclusion. Since all grades received the same curriculum treatment, it may be that the particular materials selected were a poor match for the third graders' vocabulary, reading level, or interests. Although the teacher variable was not discussed, it may be that the teacher's own attitudes affected the results obtained. The selection of a posttest-only design makes it difficult to determine just how much change did occur among the experimental subjects. Considerably more research is needed before the question of when to begin career studies can be answered with confidence.

Weeks et al. (1977) focused their study on children's occupational choice. Kindergarten pupils were shown thirteen pairs of jobs, one traditionally held by men and the other traditionally held by women e.g. a firefighter and a

kindergarten teacher. The children were asked which of the jobs they would rather have when they grew older. Scores were determined by allowing one point each time a child chose the job usually held by members of his or her own sex. The two week long experimental curriculum emphasized "When I grow up I can be whatever I want to be." Bulletin board displays, stories and songs were used to support this theme. In addition, children met four women and three men who held jobs numerically dominated by the opposite sex. No significant differences were found in the posttest scores of the experimental and control classes. However, considerable ($p. < .09$) change was noted among the experimental boys. Contrary to the predicted change, they became more traditional following the treatment.

The Weeks et al. study differs from the other curriculum studies in that the instrument used involve subjects' personal job choices. With mature subjects, such an instrument may be a more rigorous test of the effects of curriculum materials than the "who can" measures. Parks (1976) reported that while fourth and fifth grade subjects who received an experimental curriculum were less traditional in their classification of jobs than a control group, there was no difference in their individual career choices. The children continued to select traditional jobs for themselves. Similarly, Schlossberg and Goodman (1972) found that 89% of their elementary school subjects felt that women could be doctors, yet none of the girls chose this occupation. These researchers apparently

felt confident that their subjects choices were realistic. The drawback associated with the use of young children's stated occupational goals as a measure of the effectiveness of curriculum materials is that they may be unable to distinguish between reality and fantasy. The job choices of young children must be interpreted with caution.

Vincenzi (1977) developed and taught a sixth grade career education unit designed to reduce the number of occupations children view as suitable for only one sex. Children's attitudes were measured by asking them who could do 24 different jobs. They received one point each time they answered that the job could be done by both men and women. The pretest mean scores of both the experimental and control classes indicate that the subjects felt that over 80% of the jobs could be done by both men and women. In spite of these high pretest results, the scores of the children who received the career curriculum treatment were significantly higher on the posttest. The mean posttest score among the experimental classes rose to 23 out of a possible 24 points. The curriculum materials consisted of magazine articles concerning men and women working in atypical occupations. One third of the ten hours of class time was devoted to visits from women working at jobs usually held by men. The researcher wished to provide models of men in jobs usually held by women but was unable to obtain any speakers. Due to the present segregation of male and female workers, this problem encountered by Vincenzi is inherent to the use of local resource people as models.

Growing interest in the influences of curriculum materials on children's attitudes towards jobs has led to the development of new materials intended to expand the job options children see open to them. However, classroom testing of these materials has brought mixed results. The varied content, duration and grade levels of the materials make it difficult to confidently predict the effectiveness of other experimental materials. The reported disinterest of many teachers in the issue of sex-roles adds to the difficulty of forecasting the influence of new materials.

Maternal Employment and Children's Attitudes Towards Jobs

The maternal employment variable has been identified as a possible influence on children's attitudes towards sex-roles and the division of labour.

Hoffman (1974) reviewed the research literature dealing with the relationship between maternal employment status and the sex-role attitudes of children. The studies cited indicated that among college-age girls, the daughters of employed women were less traditional, more egalitarian and had a higher evaluation of female competence than the daughters of full-time housewives. However, the trends evident among college-age subjects are not consistently found in studies dealing with young children.

The significance of the maternal employment variable on children's attitudes towards jobs was first reported by Iglitzin (1972). Iglitzin reported that suburban fifth graders - "especially girls" - with employed mothers had more liberal

views than children whose mothers were housewives. Unfortunately, as with the reported attitude differences between boys and girls noted above, Iglitzin did not report the raw data or the statistical tests used in its analysis. Unlike the report of differences between the attitudes of boys and girls, later studies have not always supported the finding of significant differences between the children of employed mothers and the children of housewives.

Bacon and Lerner (1975), using a sample of white, semi-rural subjects, compared second, fourth and sixth grade girls whose mothers were employed, with girls whose mothers were houswives. When asked who could have various jobs, the daughters of employed women said significantly more male dominated occupations could be filled by both sexes. However, among the female dominated occupations there was no significant difference between the two groups of girls. Bacon and Lerner also measured the vocational aspirations of their subjects and found no significant difference between the daughters of employed women and the daughters of housewives. At all grade levels the subjects stated they expected to fill traditional occupational roles. This reported incongruity between children's classification of jobs and their personal aspirations is consistent with the findings of Parks (1976) and Schlossberg and Goodman (1972) cited previously.

Marantz and Mansfield (1977) studied the sex-role attitudes and the career aspirations of white, middle-class girls between the ages of five and eleven. The children were asked

to classify 68 activities and traits as things done by women, by men, or by both sexes. The daughters of employed women responded significantly more flexibly on only 13 items. Total score differences were noted, however, among subjects of different ages. The scores of the daughters of employed women and the daughters of housewives were significantly different among the seven and eight year olds, but not among the younger or older girls. Regarding job aspirations, the nature of the mothers' work was found to be more influential than employment status per se. The daughters of women in traditional female occupations chose traditional careers for themselves significantly more often than the daughters of women in nontraditional occupations. When grouped by age, the seven and eight year old daughters of employed women aspired to significantly more diverse jobs than did the daughters of housewives. No difference was noted in job aspirations among the other age groups.

In a study of the sex-role attitudes of fifth and sixth grade boys and girls, Perloff (1977) found significant differences between the responses of children whose mothers were employed and children whose mothers were not employed, with the children of employed mothers scoring less traditionally. The Perloff study examined sex-role attitudes in general rather than the specific issue of attitudes regarding the division of labour.

Another study of children's sex-role attitudes in general was conducted by Miller (1975). Miller compared the attitudes of kindergarten girls whose mothers were employed with those of

girls whose mothers had not been employed since the birth of their daughters. The findings were much less conclusive than those of Perloff (1977). Of 30 items dealing with who might perform various activities, just 8 were significant or approached significance at the .10 level. On the significant items, daughters of employed women are reported to have given more nontraditional answers. The method of scoring was not included in Miller's report. The meaning of "more nontraditional" is, therefore, unclear. It may or may not indicate that the subjects felt both sexes could perform the activities. On a teacher rating scale, daughters of employed women were reported as different from daughters of housewives on only two out of thirteen items. Again the level of significance was set at .10, detracting from the confidence with which the findings can be accepted. On a measure of self-esteem no difference was found between the two groups of subjects.

Since the subjects involved in the present study were seven and eight year olds (the age at which Marantz and Mansfield (1977) noted a significant difference among their subjects), it was predicted that on the pretest, the children of employed mothers would respond that more jobs which are presently dominated by men could be held by both sexes. On the basis of Bacon and Lerner's (1975) findings, no significant difference was predicted between the responses of children of employed mothers and the children of housewives when asked who can hold jobs presently dominated by women.

Social Class and Attitudes Towards Jobs

The relationship between children's social class background and their classification of jobs by sex has yet to be studied empirically. However, Albrecht (1976) has conducted a large scale study of these variables among adults. In the light of Thornburg and Weeks'(1975) findings that parents transmit their own evaluations of jobs to their children, Albrecht's findings are relevant here. Albrecht found significant differences between subjects with different amounts of formal education. Adults with higher levels of education were more likely to report that occupations were equally suitable for both men and women, while those with less education were more likely to report that the jobs were suitable for only one sex or more suitable for that one sex than the other. Interestingly, when Albrecht used income level as an indicator of social class the findings were quite different. No significant differences were found in the responses of subjects at different income levels. While these findings do not support confident predictions as to the responses of children in the present study, one might expect the children of better educated parents to respond that more jobs can be done by both men and women than the children whose parents have less formal education.

CHAPTER III

Method

Sample

Four classes of second grade students were randomly selected from schools in the Saanich School District. All classes contained students of mixed levels of ability and maturity and all teachers had several years of teaching experience.

Two of the four participating classes were randomly selected to receive the experimental curriculum treatment. One class received a placebo treatment and one class served as a comparison group.

Instrument

The occupational classification scheme of all students was measured using an instrument similar to Barclay's (1974). The measure consisted of 20 sketches of either a workplace or the tools used in a particular job. The sketches were shown to the children, one at a time, and the researcher read a brief description of each job. The children were asked to consider who could do the job: only men; only women; or both men and women, then to print their responses on answer sheets. The children were told that the researcher was only interested in their opinions and that their answers were not going to be marked right or wrong. The occupational classification measure was scored by allowing one point each time the child responded that both men and women could do the job illustrated.

Research Design

All classes were pretested using the occupational classification measure. The pretesting was conducted by the researcher in the children's classroom. While the pretesting was being done, the children's teachers were asked to complete the Brogan and Kutner (1976) sex-role orientation measure. This instrument yields a score on a traditional to non-traditional continuum relating to beliefs about appropriate behaviour for both sexes. On the same occasion, the children were asked to print sentences telling their parent's jobs. Parents' occupations were later verified by the teachers, or, when necessary, by checking office records or by consulting other teachers who had taught the children or their siblings and knew their families. In all classes, the pretesting was conducted immediately preceding recess. Following recess, the Goodenough-Harris Drawing test was administered to the students.

Fathers' occupations were classified into three socio-economic status groups using the Blishen (1971) scale. This scale ranks 320 occupations by using 1961 Canadian census data regarding the income and education of male workers in each job category. To illustrate, chemical engineers ranked first and hunters and trappers ranked last. Since 1961, workers in many of the lower ranked occupations have achieved salary levels equal to or higher than those ranked higher by Blishen. For example, "plumbers and pipefitters" and "paper products makers" are both placed in the bottom third of Blishen's scale while "school teachers" and "librarians" are in the top third.

Therefore, although salaries were considered in the creation of the scale, it now more strongly reflects levels of educational achievement. As the Blishen scale was created by using data for male workers only, it was considered to be unsuitable for use with those children in the study whose mothers were single parents. A fourth socio-economic status category was used for children from single parent families. In addition, subjects were dichotomized on the basis of whether their mothers were employed or homemakers.

The Goodenough-Harris Drawing Test was used to measure the children's intellectual maturity. The "Draw a Man" portion of the test was used, and the children's raw scores were the basis for classifying them into three groups.

The occupational classification scores of all students were later analyzed using the children's sex, their families' socio-economic level, their mothers' employment status and the children's intellectual maturity as variables.

Following the pretesting, three of the participating teachers used Social Studies materials provided by the researcher. The fourth class, included for comparison, continued with its regular Social Studies programme.

Approximately six weeks after the pretesting, all children were posttested using the same occupational classification measure. The time between the pretesting and posttesting varied somewhat from class to class as the participating teachers spent different periods of time completing the teaching units. These variations from class to class were due to

differing timetables and time allotments for Social Studies. Two weeks after the posttest the children were post-posttested, again using the same measure. The changes in the children's scores were noted.

Materials

The experimental materials were used by two of the teachers. They consisted of a six week Social Studies unit dealing with life on a Chinese commune. The experimental unit was compatible with the Social Studies course of study which prescribes "Communities" as the topic for study while leaving content selection to the classroom teacher. The teaching materials presented many aspects of commune life. Throughout the unit the teachers were encouraged to compare and contrast the situations portrayed in the experimental materials with the corresponding situations in the local community. The noteworthy feature of the experimental materials is that they portrayed men and women doing the same types of work e.g. male and female bank tellers; male and female construction workers. The teaching unit did not, however, concentrate on the sex of the workers. Rather, samples of many facets of Chinese life were presented, from music and poetry to medical care and the place of the elderly. The illustrations of workers, while consciously included by the researcher, were incidental in the study of life on a commune.

In developing the experimental materials care was taken to avoid the weaknesses noted in the materials of other researchers. They comprised a cohesive unit directly related to the

prescribed course of study. The materials and activities took into account the reading level and attention span of second graders. The teaching strategies were based on inquiry methods with opportunities for the students to evaluate what they observed.

The occupations shown in the experimental materials did not all correspond with those in the instrument used to measure the subjects' classification of occupations. The experimental curriculum materials included pictures of both male and female workers for six of the occupations in the classification measure. Subjects' scores for the subset of those six occupations represented in the experimental treatment were computed and compared with their total scores.

The placebo treatment used a similar format and range of materials, but dealt with the children's own community. The local unit included the study of six sites in the municipality in which the children lived: a mushroom farm, a gravel pit, an art gallery, a research laboratory, a hospital and a housing development for retired people. As in the case of the experimental unit, workers were portrayed, but they were not the focus of study. The placebo treatment included pictures of an equal number of male and female workers performing an equal number of jobs. However it differed from experimental unit in that the men and women were shown doing different jobs. In the placebo unit, the representation of men and women in equal numbers and in an equal number of jobs contrasted with the image reported by analysts of the existing teaching materials.

Limitations

Children's knowledge of the division of labour is derived from a variety of sources, many of which were uncontrolled in this study. The selection of participating classes was therefore randomized to reduce any biasing effects of the following limitations:

1. Children's literature has been shown to portray women in a restricted range of occupations (Hendler, 1976; Hillman 1977; Vukelich, McCarty & Nanis, 1976). The amount and type of reading done by the participating children were not controlled.
2. Text books in reading have similarly been found to present an imbalanced and limited image of women workers (Ladan & Miller, 1975). This study examined the influence of experimental Social Studies materials which portray men and women performing the same jobs, yet participating classroom teachers continued with their regular reading programmes. The influences of curriculum materials on children's classification of jobs might be more apparent using fully integrated programmes.
3. Television is believed to contribute to children's knowledge of the division of labour in society (Frueh & McGhee, 1975; Leifer & Lesser, 1976). The amount and nature of television viewing by participating children were not controlled.
4. The toys children play with are frequently the tools of different categories of workers. The toys parents provide

for their children and the toys children observe their friends using may well influence children's attitudes regarding the suitability of jobs for both sexes. The toys available to and preferred by the participating children were not controlled.

5. The sex-role orientations of children's parents are probably very influential (Puffer, 1976; Thornburg & Weeks, 1975). The parents' attitudes were not controlled in this study.

Assumptions

1. It is assumed that the teachers of the various classes participating in the study were of comparable ability as instructors.
2. It is assumed that the sex of the teachers and the experimenter did not influence unduly the results obtained.
3. It is assumed that subjects responded honestly to the measure used.
4. It is assumed that the cultural and racial differences between the community portrayed in the experimental materials and the children's own community did not contaminate the results obtained.
5. It is assumed that subjects comprehended the directions for the measure used.

Hypotheses

This study was intended to test the following hypotheses:

1. There will be no significant difference between the pretest occupational classification scores of boys and the pretest occupational classification scores of girls.
2. There will be no significant differences among the pretest occupational classification scores of children from higher, middle, or lower socio-economic status levels.
3. There will be no significant difference between the pretest occupational classification scores of children whose mothers are employed and children whose mothers are homemakers.
4. There will be no significant differences among the pretest occupational classification scores of children who score in the top, middle or bottom third of the group on a measure of intellectual maturity.
5. There will be no significant differences among the pretest, posttest and post-posttest occupational classification scores of the children who receive the experimental treatment.
6. There will be no significant differences among the pretest, posttest and post-posttest occupational classification scores of the children who receive the placebo treatment.
7. There will be no significant differences among the pretest, posttest and post-posttest occupational classification scores of the children in the reference group.

CHAPTER IV

Results and Conclusions

Pretest Data

The pretest occupational classification scores of the subjects did not support the predictions which had been made on the basis of the review of the literature. It had been predicted that subjects' responses when asked who could do various jobs would closely match the actual division of labour reported in Canadian census data. In fact, as shown on Table 1 the children responded that many jobs which are presently dominated by one of the sexes could be done by both men and women. These responses clearly do not match the existing division of labour in Canada. The lack of congruity is difficult to interpret. Do those children who respond that jobs can be done by both men and women actually view the sexes as equally able? Or, have they simply not yet learned how the labour force is segregated? Further study is needed to answer these questions.

Tests of the first four hypotheses, to identify the effects of sex, socio-economic status background, maternal employment and intellectual maturity on children's classification of jobs, yielded no significant differences. As Table 2 illustrates, subjects' pretest scored did not differ significantly on any of these variables.

TABLE 1

Comparison of Female Representation in Selected Occupational Categories With Children's Responses That the Job Can be Done by Both Sexes

Occupation Portrayed in Pretest	Census Category	% Women Workers *	% Children Who Responded "Both"**
1. Train engineer	Locomotive engineers and firemen	0	29.76
2. Construction worker	Occupations in labouring and other elemental work, other construction trades	1.11	30.95
3. Pharmacist	Pharmacists	23.06	91.67
4. Commercial fishing	Fishermen	1.20	29.76
5. Hydro wire repair	Electrical Power Linemen and Related Occupations	1.18	8.33
6. Dentist	Dentists	4.82	90.49
7. Truck driver	Truck drivers	1.17	32.14
8. Cashier	Sales clerks, commodities	66.01	79.76
9. Carpenter	Carpenters	.55	27.38
10. Butcher	Slaughtering and meat cutting, curing and packing occupations	16.03	59.52

* Based on 1971 Census Data
** Pretest results n=84

Occupation Portrayed in Pretest	Census Category	% Women Workers*	% Children Who Responded "Both"**
11. Lathe operator	Machinist and machine tool setting up occupations	4.05	27.38
12. Child care	Babysitters	96.61	80.95
13. Doctor	Physicians and Surgeons	10.11	82.14
14. Soldier	Armed forces non-commissioned	2.12	4.76
15. Musician	Musicians	26.78	90.48
16. Teacher	Elementary and Secondary school teaching and related occupations	82.27	83.33
17. Police officer	Policemen and detectives Government	1.52	67.86
18. Power shovel operator	Excavating, grading and related occupations	.50	15.48
19. Laundry worker	Laundering and dry cleaning occupations	68.48	13.10
20. Farm worker	Farmers	3.28	34.52

370
15

TABLE 2

Comparison of the Pretest Scores of Subjects Grouped by sex, Socio-economic Status, Maternal Employment Status and Intellectual Maturity

Group	n	Mean	SD	p
Boys	45	9.96	2.95	
Girls	39	9.87	2.37	.88*
Socio-economic Status				
Upper	19	10.89	2.78	
Middle	18	10.33	2.86	
Lower	33	9.54	2.52	
Single parent or Welfare	14	8.92	2.58	.14**
Mothers' Employment Status				
Employed	30	9.82	2.52	
Homemaker	54	9.92	2.86	.53*
Intellectual Maturity				
Top	28	10.0	2.86	
Middle	28	10.25	2.49	
Lower	28	9.47	2.46	.28**

* Not significant - t-test

** Not significant - ANOVA

Changes in Occupational Classification Scores

Several significant changes in children's classification of occupations took place over the duration of the study. Between the pretest and the posttest, the mean score of one of the two experimental classes increased significantly ($p=.009$). Hypothesis 5 was, therefore, partially rejected. Unexpected significant increases ($p=.03$) also occurred in the placebo class (Table 3) leading to the rejection of Hypothesis 6. Both of the classes which showed significant gains immediately following the treatment remained high on the post-posttest.

Although the second experimental class received the same treatment, no significant changes were noted in their scores. Similarly, there were no significant changes in the scores of the comparison class. Hypothesis 7 was, therefore, accepted.

The differences between the two experimental classes illustrated in Figure 1 are difficult to explain. Both teachers used the materials with enthusiasm and followed the suggested teaching strategies. The two teachers also scored within a few points of one another at the non-traditional end of the Brogan and Kutner (1976) scale.

The scores of the placebo class are noteworthy. When compared with the pretest results of other three classes using ANOVA, the placebo class scored significantly lower ($p=.014$). Immediately following the placebo treatment the children's scores had increased significantly. Between the posttest and the post-posttest, their scores continued to rise. In spite of these increases, the mean post-posttest score of the placebo class

TABLE 3

Changes in Occupational Classification Scores

Group		Pretest	Posttest	p*	Post-posttest	p**
Experimental Class 1 (n=22)	Mean	10.40	12.09	.009	12.86	.014
	SD	3.15	3.13		4.56	
Experimental Class 2 (n=21)	Mean	10.47	11.14	.263	10.66	.825
	SD	2.89	3.00		3.66	
Placebo Class (n=21)	Mean	8.28	9.85	.030	10.28	.005
	SD	1.64	3.07		3.13	
Comparison Class (n=20)	Mean	10.50	10.50	1.00	10.70	.776
	SD	2.35	2.48		4.00	

* pretest to posttest t-test (2 tailed)

** pretest to post-posttest t-test (2 tailed)

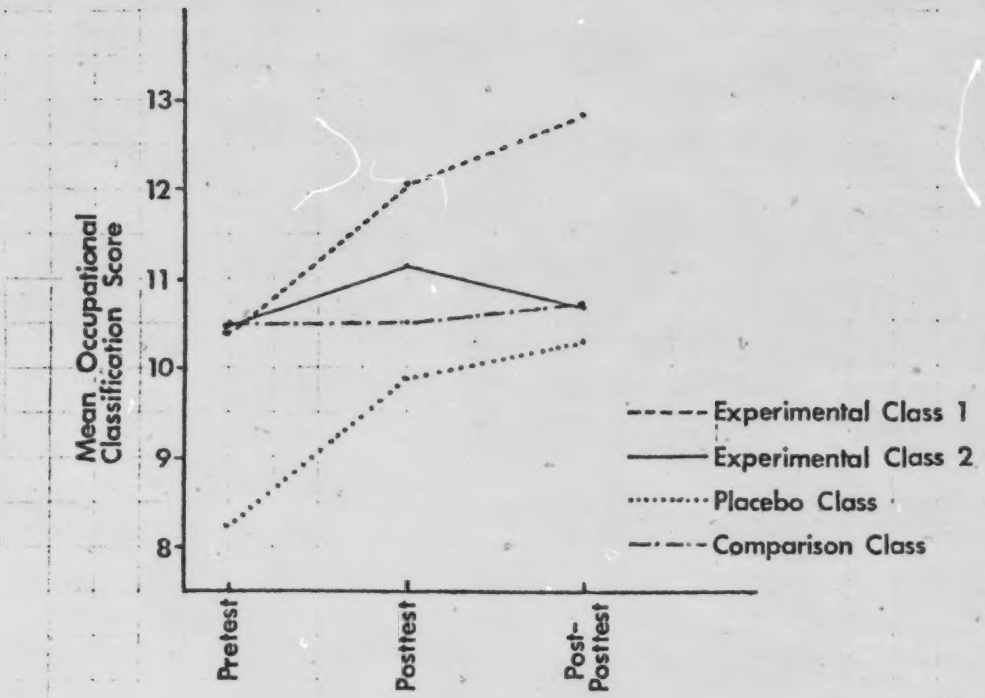

Figure 1. Changes in occupational classification scores.

was still slightly lower than the pretest scores of the other participating classes. The sex-role orientation of the teacher may have influenced the scores of this class. Although the number of classes studied was too small to use a statistical test of significance, the teacher of the placebo class scored more traditionally on the Brogan and Kutner (1976) measure. The scale yields scores between 36 and 216 with a higher score indicating a non-traditional sex-role orientation. The two experimental class teachers and the comparison class teacher all scored between 195 and 200. The placebo class teacher, however, scored 174, indicating more traditional beliefs about appropriate behaviour for males and females. It may be that this teacher has transmitted her traditional beliefs to the class.

Although total occupational classification scores increased significantly for just one of the experimental classes, the subtotals for those occupations portrayed in the experimental materials increased significantly ($p<.05$) from pretest to post-test for both classes. Only in the first experimental class, the class whose total scores increased significantly, did that subtotal difference persist to the post-posttest. Again, the placebo class yielded unanticipated results. A *t*-test comparison of the placebo children's responses on the items in the subset revealed a significant difference from pretest to post-posttest.

While the t-tests indicate significant changes took place in both experimental classes on their classification of the occupations in the subset, it is useful to look at the items individually. The subset means shown on Table 4 do not reveal where the changes took place. Figures 2 through 7 illustrate how students' responses changed over the duration of the study. The graphs illustrate that the change was not uniform. In both classes the numbers of students responding "both" increased sharply between the pretest and the posttest on the construction worker item. In contrast, the numbers responding "both" on the child care item dropped slightly for one class and remained unchanged for the other class. The number of "both" responses also decreased for one class on the soldier item. The sharpest increase in the number of "both" responses occurred on the tractor item. While one class rose dramatically on this item from pretest to posttest, and remained high on the post-posttest, the other class rose gradually throughout the study. The pattern on the doctor graph reveals that both classes started out with the majority of students responding that both men and women could be doctors. On the posttest all of the students in one class and all but one in the other class said both sexes could be doctors. By the post-posttest, however, the responses dropped to only slightly higher than the pretest scores. Clearly, the experimental treatment was not uniformly successful in demonstrating to children that occupations can be filled by both men and women.

The differential effectiveness of the experimental materials

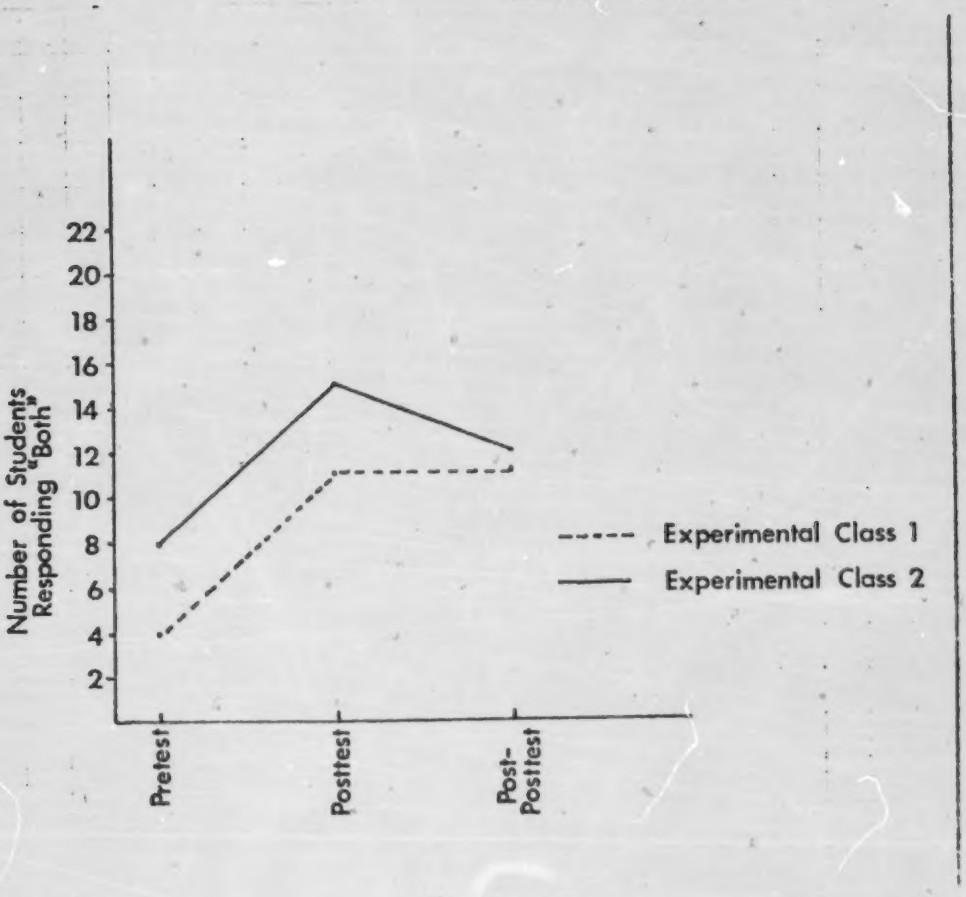

Figure 2. Changes in responses to the construction worker item.

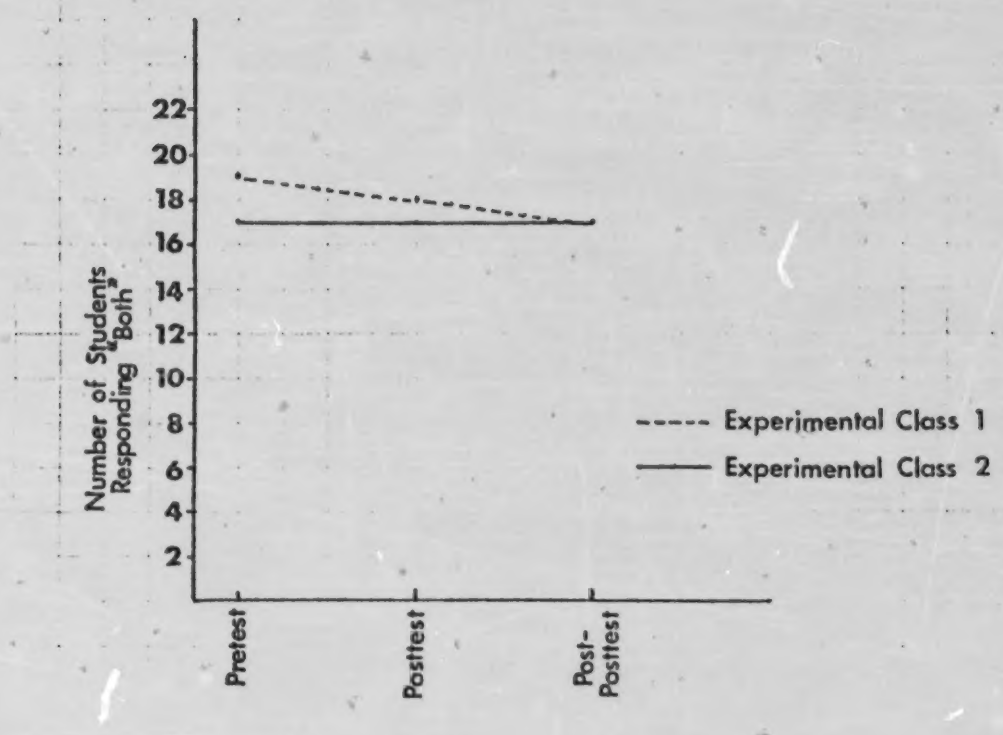

Figure 3. Changes in responses to the child care item.

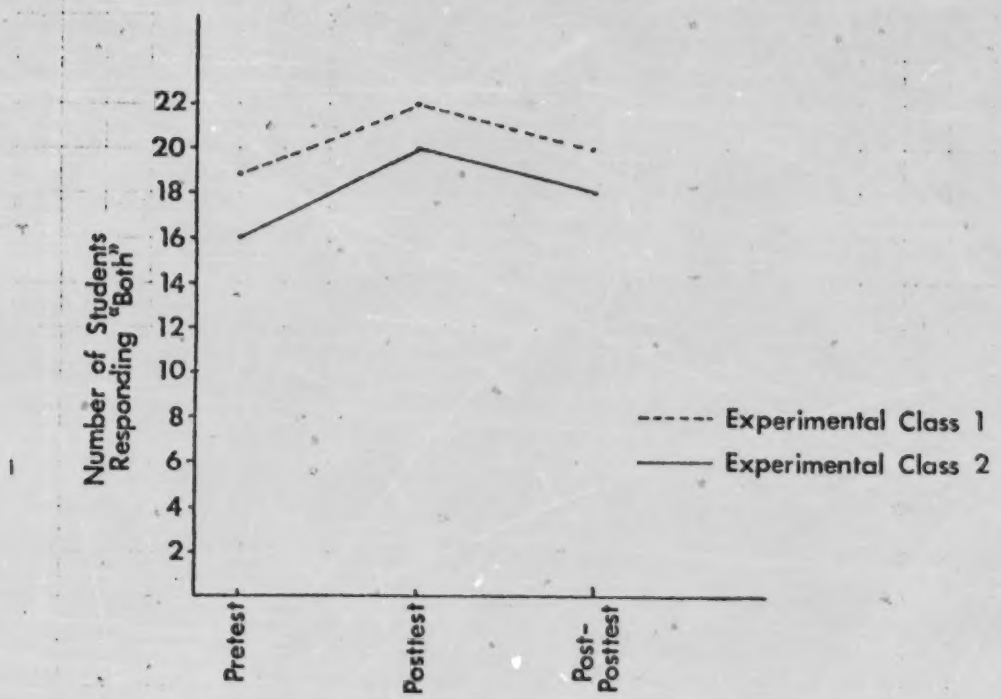

Figure 4. Changes in responses to the doctor item.

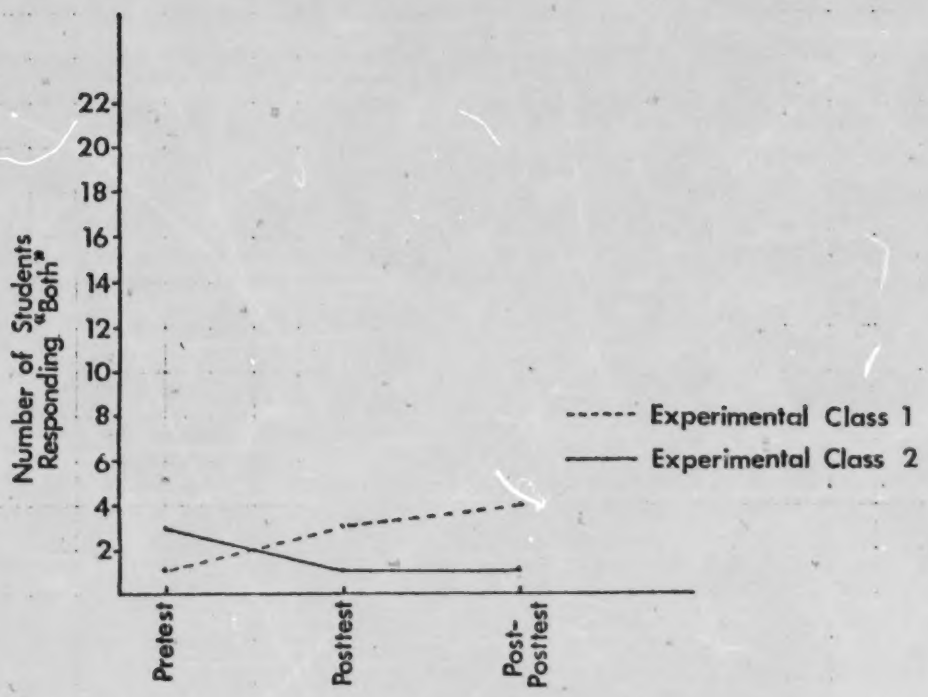

Figure 5. Changes in responses to the soldier item.

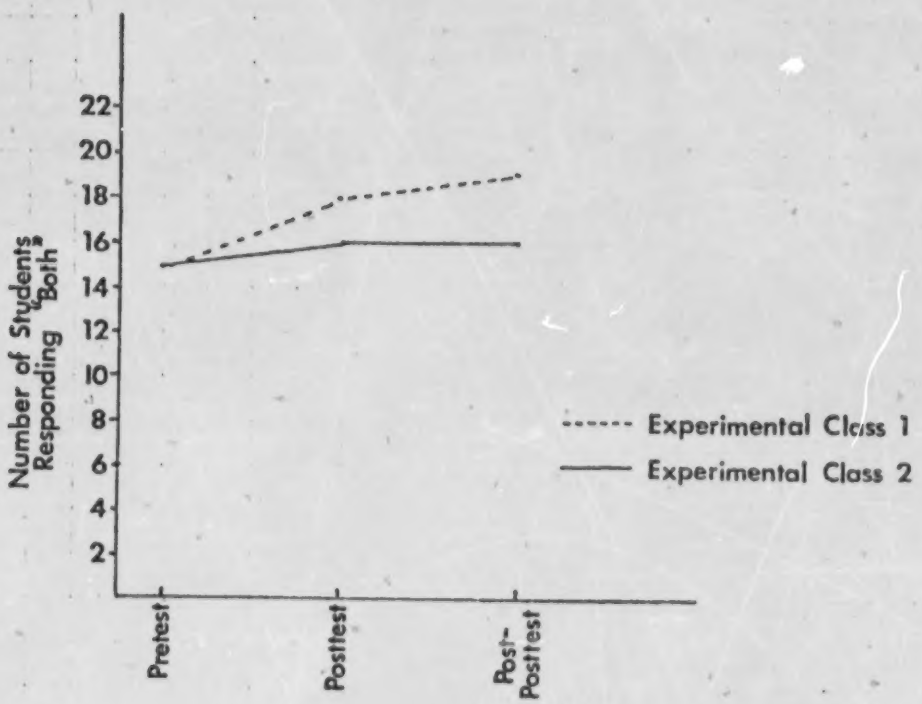

Figure 6. Changes in responses to the teacher item.

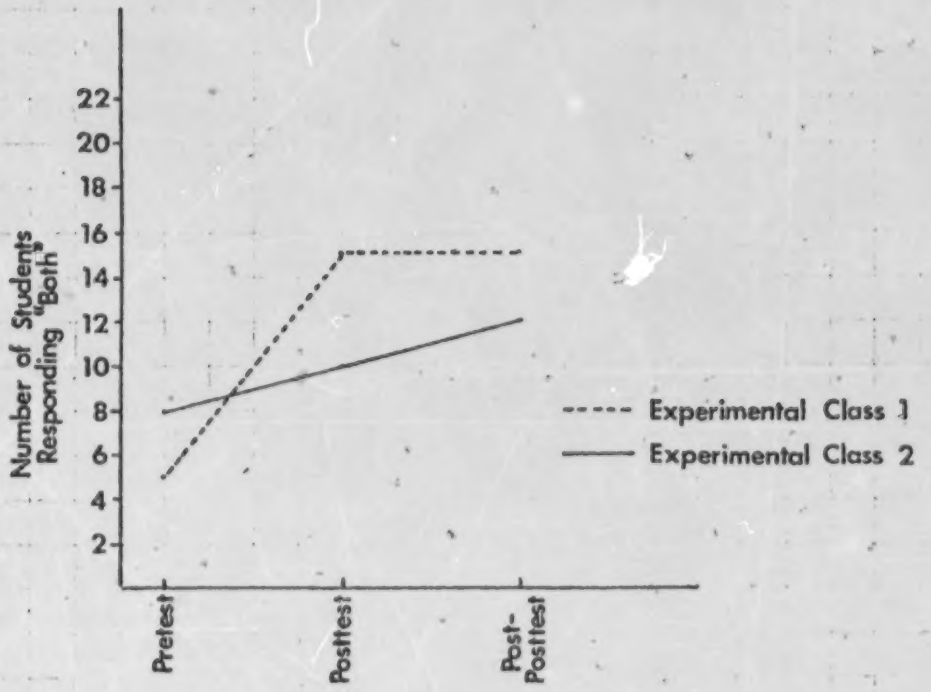

Figure 7. Changes in responses to the tractor item.

is difficult to explain. Scores increased most noticeably for the construction worker and the tractor items. On the pretest, both of these occupations scored relatively low. There was, therefore, a large amount of room for change to take place. In contrast, the child care, doctor and teacher items were all relatively high on the pretest, allowing less room for improvement. An examination of these five occupations suggests that pretest scores are a significant variable in predicting whether or not significant increases can come about. However, the soldier item does not conform to this pattern. It started low and remained low with one class actually decreasing during the study. Low pretest scores appear to be a necessary, but insufficient condition for significant increases to occur.

While it may be reassuring to vocational counsellors to know that female students are unlikely to aspire to a career based on violence and destruction, it is, nevertheless, difficult to explain the pattern of responses to the soldier item in this study. How did the children interpret the pictures they saw of girls' rifle practice and female soldiers?

As reported in Table 4, the experimental classes were not the only ones that changed significantly in their responses to to the subset of occupations. The class which received the placebo treatment approached a significant change ($p=.066$) between the pretest and the posttest and on the post-posttest scored significantly higher ($p=.047$) than on the pretest. Figure 8 illustrates the changes that took place in the placebo group. Again, the mean scores for the subset items concealed where the

TABLE 4

Changes in Classification of the Six Occupations Portrayed in the Experimental Materials

Group		Pretest	Posttest	p*	Post-posttest	p**
Experimental Class 1	Mean	2.84	3.89	.003	3.68	.003
	SD	.95	1.10		1.00	
Experimental Class 2	Mean	3.28	3.85	.036	3.71	.27
	SD	1.34	1.01		1.38	
Placebo Class	Mean	2.95	3.45	.066	3.45	.047
	SD	.82	.82		.82	
Comparison Class	Mean	3.57	3.63	.863	3.10	.10
	SD	.96	1.06		1.32	

*pretest to posttest t-test (2 tailed)

**pretest to post-posttest t-test (2 tailed)

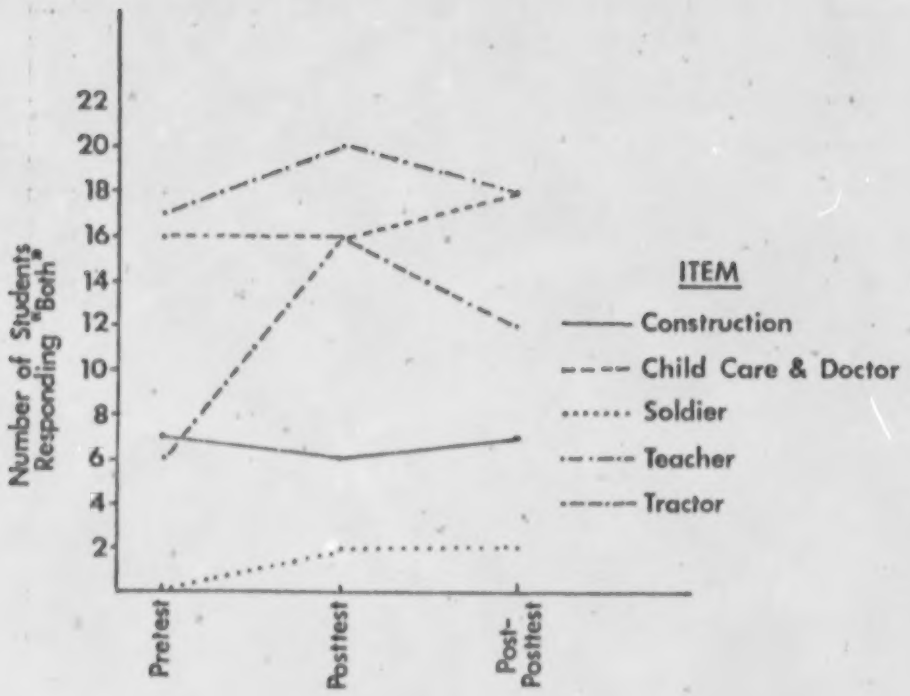

Figure 8. Changes in placebo group responses to the subset items.

change occurred. Figure 8 shows that the changes for 5 of the 6 subset items were very minor. Only the tractor items changed in a noteworthy way. As the placebo treatment did not include any pictures of women operating farm machinery, the changes which occurred are attributed to uncontrolled factors in the children's lives.

Summary of Results

Statistical analyses yielded no significant differences in the pretest scores of boys and girls; of children from high, middle or low socio-economic backgrounds; of the children of employed mothers and the children of homemakers; or of children of varying levels of intellectual maturity.

Apart from the incongruity between these results and the findings of other researchers, the pretest results were remarkable in that the children's classification of jobs varied so markedly from the actual division of labour in their community.

The effectiveness of the curriculum materials under study was not uniform. While the mean occupational classification scores of one of the experimental classes increased significantly over the duration of the study, no significant changes occurred in the mean scores of the second class.

The instrument used to measure the subjects' classification of occupations included six jobs which appeared in the experimental curriculum materials filled by both men and women. When subjects' responses to these six items were analysed separately, both experimental classes made significant increases from the pretest to the posttest. However, that increase

persisted to the post-posttest in just one of the classes.

Unpredicted statistically significant changes were obtained in the mean occupational classification scores of the children who received the placebo treatment. Their scores rose from the pretest to the posttest and remained high for the post-posttest. Also unpredicted was their significant increase from the pretest to the post-posttest on the subset of jobs which appeared in the experimental treatment.

Although significant increases came about in the numbers of jobs children said could be done by both men and women, there was considerable variation from item to item. Increases in the mean scores were due to large changes on just a few items, with many items changing very little.

CHAPTER V

Summary and Implications

There were two major purposes of this study. The first was to describe how young children classify occupations as suitable for either or both sexes and to look at the effects of several variables on their classification of jobs. The second major purpose was to test the effects on children's job classification schemes of Social Studies teaching materials which were designed to demonstrate that jobs can be done by both men and women.

Four classes of second graders served as subjects. The children were asked who could do twenty different jobs: only men, only women, or both men and women. One point was scored each time the response "both" was given. The scores of the children were then compared on the basis of sex, socio-economic status background, intellectual maturity, and the employment status of their mothers. The mean pretest scores of the subjects did not vary significantly on any of these variables. The most remarkable finding arising from the pretest scores was the extent to which the children's responses differed from the actual division of labour in the community. Many children responded that both men and women could do jobs which are in fact overwhelmingly dominated by one sex or the other.

Mixed results were obtained on the portion of the study which dealt with the effectiveness of curriculum materials in expanding the numbers of occupations children see as suitable for both men and women. Two of the participating classes used

experimental materials which portrayed men and women working at the same jobs. The mean occupational classification scores of one of the classes increased significantly from the pretest to the posttest and remained high for the post-posttest. No significant changes occurred in the other class. However, on the six jobs in the occupational classification measure which were being performed by both males and females in the experimental teaching materials, significant increases from pretest to posttest occurred among both classes. That increase persisted to the post-posttest with just one of the two classes.

Analysis of the variation in responses, item by item, revealed that change was very uneven. The children did not appear to generalize from the examples they saw of men and women doing the same work that all jobs could be done by both sexes. Seeing male and female construction workers demonstrated that both sexes could do this one type of work. It did not, however, lead to changes in responses to other, unrepresented occupations. Indeed, responses to several occupations which were illustrated in the teaching materials with both male and female workers remained unchanged. The findings offer no clear explanation for the variation between items. It may be that the relatively short exposure to egalitarian work roles was insufficient to counteract the effect of the examples of segregated work roles the children see around them and which they continued to see in their readers and library books and on television throughout the experiment.

Interesting, unpredicted findings were obtained in the case of the placebo treatment class. The Social Studies unit used by this class included pictures of equal numbers of men and women performing an equal number of jobs. The actual jobs, however, were different. Although the treatment did not demonstrate the ability of men and women to do the same work, the mean number of "both" responses increased significantly from the pretest to the posttest and remained high for the post-pos test. Since no change occurred from pretest to post-test among the comparison class this change is not attributed to any sensitizing effect of the instrument used to measure the children's classification of jobs. Rather, it appears that the portrayal of male and female workers in equal numbers and in an equal range of jobs alerted the children to the contributions of both sexes in the labour force. Perhaps this made them more receptive to examples they may have come across of men and women working together or working in non-traditional jobs.

Implications for Further Research

Although the results of the present study were mixed, it is apparent that curriculum materials can influence young children's attitudes regarding the suitability of occupations for men and women.

Further research is needed to explain the differences that were noted between classes. The teacher variable, in particular, requires further study. Do teachers with traditional views use materials which portray egalitarian roles as

often or with as much enthusiasm as non-traditional teachers? It may be that a traditional teacher would use egalitarian materials in such a way that his or her disapproval would be perceived by the children. Similarly, non-traditional teachers may use existing materials to stimulate students to question the appropriateness or desirability of having the work illustrated done by both sexes.

The emphasis placed on any curriculum materials by individual teachers may prove to be more significant than the materials themselves. If this is the case, sensitizing teachers to the issue of equality may be as necessary as curriculum changes in expanding the career options children see open to them.

Given the widespread criticism of the sex bias in many teaching materials, it seems likely that revisions will eventually be made. Careful consideration should be given to these revisions. Much of the criticism of existing materials revolves around the status inequalities between the male workers and female workers portrayed. For example, physicians are most often portrayed as males while nurses are portrayed as females. The critics of these stereotyped representations argue that young girls should see pictures of females in high status occupations so that they will aspire to high status occupations themselves. The underlying assumption of this criticism is that a high income and the level of consumption it makes possible are desirable goals. Questions such as the injustice of income differentials between categories of workers,

the consumption of non-renewable resources and the use of power by professionals are not addressed in such analyses. In preparing replacement materials, thought should be given to their total impact as well as to the sex of the workers portrayed.

In any revision, educators should also consider the increasingly computerized world our children will inherit. As fewer and fewer workers will be needed to produce the needed goods and services, preparation for leisure deserves as much attention as preparation for work. In portraying both work roles and leisure activities, teaching materials should show aptitude and interest as criteria for selection.

Just as important as teaching materials are the guides for their use. The teaching methods used to promote equality should be compatable with that goal. A teacher-centred telling approach is inappropriate. To prescribe equality of opportunity is to deny students the valuable experience of evaluating the existing division of labour themselves. If the goal is to facilitate free choice of careers, the teaching methods used should include practice in judging and choosing.

This research deals with the attitudes of young children and describes an attempt to expand the number of work options they see as open to them. This question of expectations is, however, only part of the broader problem of inequality between men and women. It is not sufficient to merely raise expectations. Students also require a working knowledge of the existing power structures and ways of dealing with those

structures. Without this knowledge, the student seeking employment in an occupation dominated by the opposite sex will be ill-equipped to respond to existing discriminatory personnel policies.

The curriculum changes needed to promote equality are broad in scope and far-reaching in their implications. The objective is so basic to people's lives it deserves to be done well. After all, fair is fair!

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APPENDIX A

Occupational Classification Measure

I am going to show you some pictures of jobs people do.
I'd like you to tell me who you think can do each job.
Do you think only men can do it, only women can do it,
or do you think both men and women can do it?
There are no right or wrong answers to these questions.
I just want to know what you think about each job.
If you think the picture I'm showing you is of a job only
men can do, print M for men on your paper. If you think
it is a job only women can do, print W for women. If you
think it is a job both men and women can do, print B for both.

1. This is a train. Trains carry coal, cars, people, and
   lots of other things. Who can drive a train?
   If you think only men can drive trains, print M.
   If you think only women can drive trains, print W.
   If you think both men and women can drive trains, print B.
2. This is a new house being built. Construction workers do
   many different jobs when they're building a new house.
   Who can be a construction worker?
   Print your answer next to number 2.
3. This is a pharmacy in a drug store. The pharmacist
   prepares the medicine and pills that doctors want their
   patients to take. Who can be a pharmacist?
4. This is a commercial fishing boat. It goes out to sea and
   returns with many fish. Who can work on a fishing boat?

5. This is a special hydro or telephone company truck. It can lift someone up high to repair broken wires.. Who can repair broken wires?
6. This is a dentist's office. A dentist checks our teeth and fills cavities. Who can be a dentist?
7. This is a truck. Who can be a truck driver?
8. This is a cash register in a store. A cashier tells customers the cost of the things they are buying and puts the money in the cash register. Who can be a cashier?
9. Here are some tools for building things out of wood. We call a person who builds things out of wood a carpenter. Who can be a carpenter?
10. This is a butcher shop. A butcher cuts large pieces of meat into small portions. Who can be a butcher?
11. This is a lathe in a factory. A lathe is used to make things out of metal. Who can operate a lathe?
12. Here are some children. They need someone to take care of them. Who can take care of the children?
13. These are some things a doctor uses. Doctors help sick people become healthy again. Who can be a doctor?
14. This is an army tank. Soldiers drive tanks and shoot them at enemy soldiers. Who can be a soldier?
15. Here are some musical instruments. Musicians make beautiful music with their instruments. Who can be a musician?
16. This is a classroom. The teacher helps the children learn new things. Who can be a teacher?

17. This is a police car. Police officers work to protect and help us. Who can be a police officer?
18. Here is a power shovel. Power shovel operators dig holes for buildings and roads. Who can run a power shovel?
19. This is a basket full of dirty clothes. Before they can be worn again they will have to be washed and dried. Who can clean the dirty clothes?
20. This is a tractor. A tractor is used to pull a plough on a farm. Who can drive a tractor?

APPENDIX B

Brogan & Kutner Sex-Role Orientation Scale

Please respond to the following items by indicating whether you strongly agree; moderately agree; agree slightly more than disagree; disagree slightly more than agree; moderately disagree or strongly disagree:

1. It is more important for a wife to help her husband's career than to have a career herself.
2. The idea of young girls participating in Little League baseball competition is ridiculous.
3. The relative amounts of time and energy devoted to a career on the one hand, and to home and family on the other hand, should be determined by one's personal desires and interests rather than by one's sex.
4. It is more important for a woman to keep her figure and dress becomingly than it is for a man.
5. The old saying that "a woman's place is in the home" is still basically true and should remain true.
6. A woman should refrain from being too competitive with men and keep her peace rather than show a man he is wrong.
7. A woman whose job involves contact with the public, e.g., salesperson or teacher, should not continue to work when she is noticeably pregnant.
8. The husband should take primary responsibility for major family decisions, such as the purchase of a home or car.

9. In groups that have both male and female members, it is appropriate that top leadership positions be held by males.

10. Unless it is economically necessary, married women who have school-aged children should not work outside the home.

11. If there are two candidates for a job, one a man and the other a woman, and the woman is slightly better qualified, the job should nevertheless go to the man because he is likely to have a family to support.

* 12. Marriage is a partnership in which the wife and husband should share the economic responsibility of supporting the family.

13. A woman should not accept a career promotion if it would require her family to move and her husband to find another job.

* 14. A married woman who chooses not to have children because she prefers to pursue her career should not feel guilty.

15. Unless it is economically necessary, married women who have preschool-age children should not work outside the home.

16. It is generally better to have a man at the head of a department composed of both men and women employees.

* 17. A husband should not feel uncomfortable if his wife earns a larger salary than he does.

* 18. It is all right for women to hold local political offices.

19. A male student and a female student are equally qualified for a certain scholarship; it should be awarded to the male student on the grounds that he has greater "career potential."

* 20. The use of profane or obscene language by a woman is no more objectionable than the same usage by a man.

* 21. It is certainly acceptable for boys, as well as girls, to play with dolls.

22. Girls should primarily be counseled to enter "feminine" vocations such as nursing, public school teaching, library science, etc.

* 23. Women should not feel inhibited about competing in any form of athletics.

* 24. Parents should encourage just as much independence in their daughters as in their sons.

* 25. Women should be able to compete with men for jobs that have traditionally belonged to men, such as telephone lineman.

* 26. It is O.K. for a wife to retain her maiden name if she wants to.

* 27. There is no reason why a woman should not be Prime Minister.

28. Career education for boys should have higher priority with parents and teachers than career education for girls.

29. Even though a wife works outside the home, the husband should be the main breadwinner and the wife should have the responsibility for running the household.

30. In elementary school, girls should wear dresses rather than slacks to school.

* 31. It is acceptable for a woman to become a member of the church clergy.

* 32. It is acceptable for women to hold important elected political offices in provincial and federal government.

33. It is not a good idea for a husband to stay home and care for the children while his wife is employed full-time outside the home.

34. The only reason girls need career education is that they may not marry or remain married.

35. There is no particular reason why a man should always offer his seat to a woman who is standing on a crowded bus.

36. Men should be able to compete with women for jobs that have traditionally belonged to women, such as telephone operator.

Scoring System

Subject's Response	Starred (*) Items	Unstarred Items
Strongly Agree	6	1
Moderately Agree	5	2
Agree Slightly More than Disagree	4	3
Disagree Slightly More than Agree	3	4
Moderately Disagree	2	5
Strongly Disagree	1	6

Total score for a subject on this scale ranges from 36 to 216. A low score indicates traditional sex-role orientation and a high score indicates non-traditional sex-role orientation.

APPENDIX C

TEACHER'S GUIDE TO EXPERIMENTAL UNIT

Community Life in Rural China

This teaching unit is intended to supplement the Year Two Social Studies curriculum. It provides an in-depth study of a particular type of community and contributes to the development of the following concepts:

A. Communities may differ

B. The community provides many services.

Using a combination of expository and inquiry learning, it includes opportunities for children to acquire cognitive, affective and psychomotor skills and provides them with another perspective from which to evaluate their own community. In addition to the knowledge and valuing components, it provides the classroom teacher with materials which may prompt student action regarding (a) the classification of jobs by sex and (b) the place of the elderly in the children's own community.

Objectives	Teaching/Learning Strategies	Resources
Skill- globe and map reading Knowledge- a map is a flat representation of a globe Vocabulary- sphere, globe	Discuss shape of earth. How do we know it's a sphere? Before there were space ships what might people have thought? Why would they have thought that way? Use globe to distinguish land from oceans. Explain why the land areas are different colours. Find Canada, Vancouver Island, Victoria, Pacific Ocean, China on globe and map. Mention that we will be learning about life in China shortly. Find the same places on children's maps.	-Picture of earth taken from space -Globe - Wall map of the world (Political map) -Outline maps for children (Maps will be the beginning of a booklet each child will complete during the unit.)

Objectives	Teaching/Learning Strategies	Resources
	Children label and colour Canada and China and Pacific Ocean and label Victoria on their own maps.	

Objectives	Teaching/Learning Strategies	Resources
Skill- use of a map key Knowledge- comparison of Canada's small population with China's large population Vocabulary- million, key, population	Population: the number of people Discuss the population of children's homes. Make a chart: The Population of My House Is: 1 2 Children add 3 gummed circles 4 5 When describing countries, population is measured in millions. Print the numeral 1,000,000. This is about 5 times as many people as in all of the Greater Victoria area.	-Hand drawn outline map of the world -Gummed circles -Chart paper

Objectives	Teaching/Learning Strategies	Resources
	Canada's population is about 22 million people. China's population is about 900 million people. If we let 1 circle represent 1,000,000 people we can illustrate the population of China and Canada on the map. Have children add circles to the map. A key tells people reading the map what the circles represent. Add key: 1 circle=1,000,000 people. Add a title to the map e.g. The Populations of China and Canada.	

Objectives	Teaching/Learning Strategies	Resources
	Discuss how things might be different in a country with many, many people.	

Objectives	Teaching/Learning Strategies	Resources
Skill- preparing objectives, planning Knowledge- incidental reading vocabulary	Discuss what we want to find out about and see in China. Children dictate questions to teacher for inclusion on a chart. Chart will remain up for the duration of the unit for reference. The topic may be introduced as an imaginary trip to China.	-Chart paper We Want to Know About China... 1. 2. 3. etc.

Objectives	Teaching/Learning Strategies	Resources
Knowledge- most people in China live on large farms called communes Vocabulary- commune, ownership	If we visited China we would find most people living on very large farms called communes. Develop the concepts of private ownership by individuals or families and ownership by the entire community. Use local examples of things we own e.g. homes, cars, land, furniture. What does it mean to own something? Can be sold or traded. In our community there are some things and places that belong to everyone. No one person can buy or sell them because they	-Chart paper In Saanich People Own These Things Privately 1. 2. 3. etc. In Saanich These Things Belong to Everyone 1. 2. 3. etc.

Objectives	Teaching/Learning Strategies	Resources
	belong to us all e.g. parks, schools, beach, museum etc. Ask children for other examples. On communes the farm land belongs to everyone. Everyone works there and everyone shares the products they grow. Have children draw: I own my ____. Everyone owns ____. Include in booklets.	

Objectives	Teaching/Learning Strategies	Resources
Skill- reading pictures for information -synthesis of information	Present slides giving an overview of the commune. Use a designative inquiry approach to discover <u>what is</u> on a commune. -Vegetable fields -Rice fields -Homes -School -Store -Barns -Animals Draw pictures of the commune from the perspective of a hill top. Try to include as many of the details as possible. Add pictures to booklets.	Slides: -Street scene in front of the department store -Department store window -Vegetable field -Rice field -Dairy herd -House and pig sty -Pigs -School yard -Neighbours visiting -Workers piling up compost in front of mushroom barns

Objectives	Teaching/Learning Strategies	Resources
Skill- reading pictures for information Affect- empathy with others Appraisive Inquiry- what ought to be the place of old people in the community?	Let's meet some of the people who live on the commune. In China it is very common for grandparents to live with their grown up children. They retire young - at 50 for women and 55 for men. They commonly babysit infants and preschoolers while the children's parents work. Discuss what it would be like having grandparents live with you. Imagine the grandparents' point of view. Why might they like it or dislike it? Role Play: Children dramatize discussions among	Slides: -Young child in front of her home -Grandmother and baby -Family in doorway of their home -Family group of mother, daughter and grandfather -Father taking son to commune clinic - 3 generations -Grandfather and child Compare with: Pictures from Year Two Set: 2c19 and 2c15 -old people in Vancouver

Objectives	Teaching/Learning Strategies	Resources
	the old people in Vancouver and among grandparents on the commune.	

Objectives	Teaching/Learning Strategies	Resources
Prescriptive Inquiry-How can we make our grandparents and other older people feel happy?	Invite some grandparents to visit the class and tell the children how they spend their days now and discuss changes they have seen since they were young. Arrange a visit to a senior citizens centre for the children to sing or give a choral speaking performance etc. for the old people. Write notes and make gifts for grandparents. This section may be expanded to language arts if the teacher wishes- e.g. discussion of the images of the elderly in books.	Books: -Grandpa and Me by Patricia Gauch -I Have Four Names for my Grandfather by Kathryn Laskey -Grandmother and I by Helen E. Buckley

87.

Objectives	Teaching/Learning Strategies	Resources
Skill- reading pictures for information Knowledge- compare and contrast the commune primary school with the school the children attend. -Chinese written language is based on characters representing an entire word Vocabulary- characters, abacus	Let's visit the children in their school. How is it similar to our school? How is it different from our school? Explain how characters differ from our alphabet. Each one represents a word. Print some examples on the board. Children print them in booklets. Compare the time required to learn to read Chinese with the time required to learn to read English. Why would it take longer to learn to read Chinese?	Slides of primary school children: -Outdoor P.E. class -Badminton game (Note the writing on the wall in the background) -Girls playing a billiard-type game -Music class -Art class paper cutting -Art class model building -Target practice Photographs: -Math class -Children's paper cutting art work -Exercising

Objectives	Teaching/Learning Strategies	Resources
		-Working in the school garden Samples of writing

Objectives	Teaching/Learning Strategies	Resources
Correlation with other subject areas	Arithmetic: Construct abacuses and learn to add and subtract using them. Music: Listen to record of Chinese traditional instruments Phys. Ed.: Practice the exercise routines Chinese people do in the early morning. Health: Learn the eye exercises Chinese school children do 3 or 4 times per day. They claim the exercises prevent short sightedness. Art: Paper cutting. Supplementary Reading: Samples of Chinese books in translation. Poetry: Chinese children's poems in translation.	-Instructions from Prime Areas, vol.16, n.1, Fall, 1973, 49-51. -Rounder record #4008 -Abacus value chart -Poster of shadow boxing routines. -Activity record #AR 582 -Eye exercise chart -Samples of paper cutting work as models of the technique -Books: -The Adventures of a Lead Pencil -I Am on Duty Today -Hello! Hello! Are You There?

Objectives	Teaching/Learning Strategies	Resources
		-Little Pals -Little Ching and Hu Tzu Guard the Cornfield -Good Children -Flowers in Full Bloom

Objectives	Teaching/Learning Strategies	Resources
Affect- all jobs are important to others in the community -Jobs can be done by both men and women Skill- reading pictures for information	Compare and contrast housing construction on the commune with construction here. Discuss the tools and equipment the people are using to help them do their work. Construct a table top model of the commune. Add fields, barns, homes, animals etc. Children participate in planning the model. A commune is extremely large - it could be as large as the whole Saanich peninsula - so it is more practical to just show part of it.	Slides of people working: -Construction of new housing -Mixing dirt and water for mortar -Carrying water for mortar -Delivering bricks to the construction site -Unloading bricks -Babysitting -Transporting eggplant to homes -Transporting soiled straw from animal barns to compost piles at mushroom barns -Arranging compost in piles

Objectives	Teaching/Learning Strategies	Resources
		-Transporting reeds for weaving -Vegetable garden weeding

Objectives	Teaching/Learning Strategies	Resources
Knowledge- services available to commune residents Vocabulary- prescription, accupuncture	Read the pictures together. Prepare a mural of people working on the commune. Each child selects the job he or she would like to do and illustrates it. Pin the pictures onto the mural.	Slides: -Commune clinic -Pharmacy -Dentist's office -Child receiving accupuncture treatment -Pharmacist combining herbs for traditional Chinese medicine treatment. Pictures: -Inside a bank -Inside the department store -Barefoot doctor

Objectives	Teaching/Learning Strategies	Resources
Knowledge- sequence involved in rice production Vocabulary- irrigation, transplant, harvest	After studying the pictures draw a picture story showing the sequence from planting to consumption. Include pictures in booklets.	Slides: -Rice field -Pumping station of the bank of the river -Irrigation ditch -Rice field with soya beans growing along roadway -Pump which moves water from irrigation ditch to the fields -Close-up of rice growing Pictures: -Transplanting rice to the paddy -Harvesting rice Rice growing chart

Objectives	Teaching/Learning Strategies	Resources
Appraisive Inquiry- select what you considered to be the most interesting thing about the commune	Make a post card to send home to your parents. On the picture side illustrate what was most interesting. In the letter tell what you liked and your reasons. Additional topics should be included to answer questions on the class chart, compiled at the beginning of the unit.	

APPENDIX D

TEACHER'S GUIDE TO PLACEBO UNIT

Our Community

Objectives	Teaching/Learning Strategies	Resources
Skill- map reading -use of a map key -use of compass points to describe spatial relationships Knowledge-incidental reading vocabulary on the map -location of Central Saanich relative to Victoria and the Saanich Peninsula	Study Central Saanich wall map together. Have children find familiar roads, buildings etc. Explain how the key is used. It tells the person reading the map what the lines represent. Find the boundaries, roads etc. listed in the key. If you were looking down from an airplane which lines would you actually be able to see? Explain the compass points. Describe places on the map in terms of direction from the school.	-Hand drawn outline map of Central Saanich -Photo of S.W. British Columbia taken from space (Both to be left on display for the duration of the unit)

Objectives	Teaching/Learning Strategies	Resources
	Point out Central Saanich on the space photo.	

Objectives	Teaching/Learning Strategies	Resources
Skill- map reading	Relate the children's maps to the wall map. Help the children find the location of the school on their own maps. Show the slides and help the children locate the sites on the wall map and on their own maps. The maps can be used as the 1st page of booklets which will be added to as the unit is developed. Correlation with Language Arts: Maps poem Ferry Boats poem	-Children's maps of the Saanich Peninsula -Slides: -Mill Bay Ferry Terminal -Central Saanich Municipal Hall -Saanichton Post Office

Objectives	Teaching/Learning Strategies	Resources
Skill- reading pictures for information Knowledge- sequence involved in the production of sand and gravel - jobs people do in the community - machinery helps them do the jobs	The unit may be introduced as an imaginary trip around the community. The first stop on the trip is the Butler Brothers' Pit. Study the slides. Discuss what the machinery is used for in the pit	Slides: -Overview of the pit -Sorted sand and gravel in stockpiles -Digging sand out of the cliffs -Digging gravel -Dumping a load of sand and gravel into the sorting machine -Sorting machine (Layers of wire mesh sift the gravel by size of the rocks) -Washing plant (Sorts sand by texture) -Washing plant operator

Objectives	Teaching/Learning Strategies	Resources
		-Washing plant bins holding sand of different textures -Dump truck driver -Emptying a bin of sand into the dump truck to be moved to a stockpile

Objectives	Teaching/Learning Strategies	Resources
Skill-reading pictures for information Knowledge- how sand and gravel products are sold -subtraction to solve a practical problem	Study the slides. Explain how the customers' trucks are weighed empty on the way into the pit, then weighed again when they are leaving the pit with their sand or gravel. The empty weight is subtracted from the full weight and the customer pays Butler Brothers for the sand or gravel by its weight. Calculate the cost of some loads of gravel using simple, even amounts for the empty and full weights.	Slides: -Loader filling up a customer's dump truck with gravel -Pit office and scale

Objectives	Teaching/Learning Strategies	Resources
Skill- aerial photo study -use of a stereoscope	Present the photographs. Ask the children if they recognize the place. Tell them it's a place marked on their wall map. When they know where it is, find different features on the photo: roads, buildings, vehicles etc. Teach the children how to use the stereoscope to see the pit area. The photos and stereoscope can be left out for children to experiment with in their spare time.	-Aerial photographs of the pit -Stereoscope

Objectives	Teaching/Learning Strategies	Resources
Knowledge- how ready-mix is made and used	Explain how the cement, sand and gravel are stored in the bins in the ready-mix plant. The trucks drive under the plant to get filled up with these ingredients and water. The truck mixes them on the way to the construction job where they are needed. Discuss uses for ready-mix.	Slides: -Ready-mix trucks -Ready-mix plant -Ready-mix driver washing out a truck at the end of the day

Objectives	Teaching/Learning Strategies	Resources
Knowledge- what happens to a gravel pit when all the gravel has been removed?	These trucks are dumping fill into the old pit. They come from construction projects all over the peninsula to get rid of unnecessary rock and dirt. When it is filled up, grass and trees will be planted so we won't be able to tell that there was once a gravel pit here. Prepare a mural of the pit. The children can illustrate the machinery and vehicles at the pit and add them to the mural. Correlation with Language Arts: Danny Dump Truck poem.	-Slides of dump trucks dumping fill into the old pit.

Objectives	Teaching/Learning Strategies	Resources
Knowledge- jobs people do in the community -sequence involved in mushroom production Skill- reading pictures for information -map reading to locate the farm and the route from the school to the farm	Study the slides of the mushroom farm. Read the booklets. Add mushroom booklets to the unit booklets. Correlation with Langusge Arts: The Elf and the Dormouse.poem Correlation with Science: Pick some wild mushrooms for a class collection. Classify them and label them with the help of Mushroom Collecting For Beginners.	Slides: -Mushroom barn - Mushroom grower in an empty room that is being disinfected -Picking mushrooms -Mushrooms growing -Mushroom picker -Baskets of mushrooms ready to be washed and sold -Mushroom grower in attic checking air conditioning equipment -Emptying compost after harvesting the crop Booklets outlining the way

Objectives	Teaching/Learning Strategies	Resources
		mushrooms are grown. -The Elf and the Dormouse chart -Books: -The Compost Heap by H. Rockwell -Toadstools and Such by S.P. Russell -Fairy Rings and Other Mushrooms by G. Conklin

Objectives	Teaching/Learning Strategies	Resources
Skill- reading pictures for information -Map reading to find the hospital on the wall map -classifying	If we went to the hospital who might we meet working there? List the children's answers. Study the slides. List the different workers who actually do work in the hospital. Compare the lists. Study the list of jobs people do in the hospital. Can they be grouped into categories? e.g.-people who look after the patients' health -people who work in offices -people who help make the patients more comfortable	Slides of personnel at Saanich Peninsula Hospital: -Nurses -Maintenance man -Director of nursing -Orderly -Activity aide -Volunteer -Cook -Dietician -Bus driver -Store keeper -Linen supervisor -Maintenance supervisor -Housekeepers -Accountant

Objectives	Teaching/Learning Strategies	Resources
	-people who look after the building Correlation with Language Arts: Danny Goes to the Hospital by J.L. Collier	-Payroll clerk -Bookkeeper -Accounting clerk

Objectives	Teaching/Learning Strategies	Resources
Appraisive and Prescriptive Inquiry- The place of the elderly in the community	Would this hospital be a good place to stay if you were very old? What things would you like about it? What things would you not like? Are there things we can do to make the patients feel happy? From the children's suggestions select a project e.g.make gifts, draw pictures, send poems etc. for the patients at Saanich Peninsula Hospital.	Review the slides which include pictures of patients: -In dining room finishing breakfast -In a reclining chair with a nurse -In hallway in a wheelchair -In activity room pitting prunes for lunch -Playing a toy bowling game with a volunteer

Objectives	Teaching/Learning Strategies	Resources
Skill- reading pictures for information Knowledge- what happens inside the agricultural research station Vocabulary- scientist, microscope, laboratory	Study the slides. Explain that the scientists who work at the research station study insect pests and plant diseases. They learn how to get rid of pests and how to keep the plants healthy. Which people in the community would benefit most from this work? Farmers, nursery owners, gardeners. Have the children bring in some insects. Look at them through a magnifying glass and under a microscope	Slides: -Administrative offices -Entomologist at work in a lab -Technician in the same laboratory -Examining the insects under a microscope -Plant pathologist studying a diseased plant -Research technicians

Objectives	Teaching/Learning Strategies	Resources
	Illustrate and add to booklets: I looked at a ___with my eyes: I looked at a ___ with a magnifying glass: I looked at a ___under a microscope:	

Objectives	Teaching/Learning Strategies	Resources
Knowledge- sequence involved in a potter's work Skill- classifying	Study the pictures of the art gallery. Explain that all the things for sale at the gallery are produced by artists. They are not machine made but are made one at a time, by hand, by the artists. Study the slides to see how pottery is made. Compare items available in stores in the community - are they made in factories or hand made one at a time? Make a chart: Made in Factories 1. 2.	Slides: -Maples Gallery -Pottery and paintings on display in the gallery -Potter at her wheel -Shaping the clay -Building up the shape -Cutting off one dish from the clay -3 bowls ready to dry for a day -Trimming a dry piece of pottery -Placing pots in a kiln -Waxing the bottom of

Objectives	Teaching/Learning Strategies	Resources
	3.	a piece of pottery
	etc.	to prevent glaze
	Hand Made	from sticking to
	1.	the base
	2.	-Glazing a plate
	3.	-Brick kiln for
	etc..	firing glazed
	Correlation with Art: Make	pottery
	pottery, fire it and glaze it.	-A finished plate
		ready to be sent
		to the gallery

Objectives	Teaching/Learning Strategies	Resources
Knowledge- what do people do when they stop working? Appraisive and Presciptive Inquiry- the place of the elderly in the community Vocabulary- retired	Study the slides of the senior citizens' housing project. Would you like to live here? What things would you enjoy? What things wouldn't you like? What could we do to make these retired people feel happy? From the children's suggestions select a project. If possible, arrange a visit to the project. The children could sing or put on a play etc. for the residents.	Slides: -Senior citizens' apartment project -Project recreation centre -Residents of the project at a party in the recreation centre -Playing pool -Display of crafts people do as hobbies

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The Effect on Primary Children's Classification of Occupations by Sex of a Social Studies Unit on Life in Rural China

Author Vicki Bridge Mulligan
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August 24, 1979
Date